In the Claims

1. A method for controlling the velocity of a disk drive transducer head, comprising:

introducing for a first period of time a first quantity of electrical power to a voice coil motor to move said transducer head, wherein said first period of time is not dependent on a velocity of said transducer head;

determining said velocity of said transducer head; and

introducing for a second period of time a second quantity of electrical power to said voice coil motor to move said transducer head, wherein said second period of time is not equal to said first period of time, and wherein said second period of time is not dependent on said velocity of said transducer.

2. The method of Claim 1, wherein said step of determining a velocity of said transducer head comprises:

removing said electrical power from said voice coil motor for a period of time; and

measuring a BEMF voltage across said voice coil motor, wherein said BEMF voltage indicates a velocity of said transducer head.

3. The method of Claim 1, wherein said first and second quantities of electrical power are equal.

4. The method of Claim 1, wherein said first and second quantities of electrical power are not equal.

5. The method of Claim 1, wherein a first proportioning value equal to an inverse of said first period of time is applied to a calculation of an amount of power to obtain said first quantity of electrical power, and wherein a second proportioning value equal to an inverse of said second period of time is applied to a calculation of an amount of power to obtain said second quantity of electrical power.

6. The method of Claim 1, wherein a voltage applied to said voice coil motor during said first period of time is not equal to a voltage applied to said voice coil motor during said second period of time.

7. The method of Claim 1, further comprising:

incrementing a counter for each period of time during which electrical power is introduced to said voice coil motor;

providing a table of time values; and

using a value of said counter as a table index, wherein a time value pointed to by said table index determines said first and second periods of time.

8. The method of Claim 7, wherein for each of said time values said table includes a corresponding proportioning value, wherein a first of said proportioning values is applied to a calculation of said first quantity of electrical power, and wherein a second of said proportioning values is applied to a calculation of said second quantity of electrical power.

9. The method of Claim 1, wherein said first and second quantities of electrical power are controlled by controlling at least one of a drive voltage and a drive current.

10. The method of Claim 1, wherein at least a one of said first and second periods of time are randomly determined.

11. The method of Claim 1, wherein at least one of said first and second periods of time are pseudo-randomly determined.

12. The method of Claim 1, wherein said first periods of time are randomly determined, and wherein an algorithm used to calculate said first quantity of electrical power includes as a term a value that is inversely proportional to said randomly determined first period of time.

13. The method of Claim 1, wherein said first period of time is pseudo-randomly determined, and wherein an algorithm used to calculate said first quantity of electrical power includes as a term a value that is inversely proportional to said pseudo-randomly determined first period of time.

14. The method of Claim 1, wherein said second period of time is a multiple of said first period of time.

15. The method of Claim 1, wherein said second quantity of electrical power is greater than said first quantity of electrical power if said determined velocity of said transducer head is less than a desired velocity.

16. The method of Claim 1, wherein said second quantity of electrical power is less than said first quantity of electrical power if said determined velocity of said transducer head is greater than a desired velocity.

17. The method of Claim 2, wherein said step of measuring a voltage across said voice coil motor comprises comparing said measured voltage to a reference voltage corresponding to a desired velocity of said transducer head.

18. The method of Claim 1, further comprising:

determining a velocity of said transducer head after said step of introducing a second quantity of electrical power;

introducing for a third period of time a third quantity of electrical power to said voice coil motor to move said transducer head;

determining a velocity of said transducer head after said step of introducing a third quantity of electrical power;

introducing for a fourth period of time a fourth quantity of electrical power to said voice coil motor to move said transducer head, wherein said first, second, third and fourth periods of time are not equal.

19. The method of Claim 18, wherein said first, second, third and fourth quantities of electrical power are equal.

20. The method of Claim 1, wherein said steps are repeated until said disk drive transducer head has been loaded onto a surface of said disk drive.

21. The method of Claim 1, wherein said steps are repeated until said disk drive transducer head has been unloaded from a surface of said disk drive.

22. The method of Claim 1, wherein said first and second quantities of electrical power are determined by a controller, and wherein said quantities of electrical power are dependent upon a velocity of said transducer head.

23. The method of Claim 1, wherein said first and second quantities of electrical power are dependent on at least a velocity of said transducer head and an accumulated velocity error.

24. The method of Claim 1, wherein said first and second quantities of electrical power are determined by a controller implementing a control algorithm.

25. The method of Claim 24, wherein said controller provides an output signal I to said voice coil motor, wherein $I=Kp_n*BEMFerror_n+Nulli_n$, and wherein $Nulli_{n+1}=Nulli_n+Ki*Kp_n*BEMFerror_n$.

26. The method of Claim 24, wherein said control algorithm comprises a control algorithm having an integral term.

27. The method of Claim 26, wherein a fixed fraction of a previous quantity of electrical power introduced to said voice coil motor is added to said integral term of said control algorithm.

28. A method for loading and unloading a hard disk drive transducer head, comprising:

providing a first amount of electrical power to a voice coil motor for a first period of time to move said transducer head with respect to a surface of a storage disk;

measuring a velocity of said transducer head;

comparing said measured velocity to a desired velocity; and

providing a second amount of electrical power to a voice coil motor for a second period of time to move said transducer head with respect to said surface of said storage disk, wherein said second amount of power is proportionate to a difference between said measured velocity of said transducer head and said desired velocity, and wherein said first period of time does not equal said second period of time.

29. The method of Claim 28, wherein said step of determining a velocity of said transducer head comprises:

removing said electrical power from said voice coil motor for a period of time; and

measuring a back EMF voltage across said voice coil motor, wherein said back EMF voltage indicates a velocity of said transducer head.

30. The method of Claim 28, wherein said desired velocity is a target velocity.

31. The method of Claim 28, further comprising providing an Nth amount of power to said voice coil motor for an Nth period of time to move said transducer head with regard to said surface of said storage disk.

32. The method of Claim 31, wherein said Nth amount of power is a function of:

1) a difference between said measured velocity of said transducer head and said desired velocity; and

2) an accumulated difference between said measured velocity and said desired velocity.

33. The method of Claim 28, wherein said steps of providing a first amount of electrical power, measuring, comparing and providing a second amount of electrical power are repeated until said transducer head has attained a desired position with respect to said storage disk.

34. The method of Claim 28, wherein said first and second periods of time are not equal to zero.

35. A disk drive apparatus, comprising:

a base;

a magnetic storage disk rotatably mounted to said base;

an actuator arm pivotally mounted to said base;

a cam;

a transducer head mounted to a first end of said actuator arm, wherein said transducer head is capable of reading information from and writing information to said magnetic storage disk;

a voice coil motor for moving said first end of said actuator arm radially across said magnetic storage disk from a first position in which said actuator arm is engaged with said cam to a second position in which said actuator arm is positioned such that said transducer head is capable of addressing information stored on a surface of said magnetic disk;

a controller for producing an output signal for actuating said voice coil motor to move said transducer head from said first position to said second position, wherein said voice coil motor is provided a first amount of electrical power over a first period of time to move said actuator arm, wherein following said first period of time plus an additional period of time a back electromotive force of said voice coil motor is sampled to determine a velocity of said transducer head, wherein said voice coil motor is provided with a second amount of electrical power over a second period of time to move said actuator arm, and wherein said first period of time is not equal to said second period of time.

36. The disk drive apparatus of Claim 35, wherein said first and second amounts of electrical power are equal.

37. The disk drive apparatus of Claim 35, further comprising a counter, wherein said counter points to a table of values, wherein said values determine said first and second periods of time.

38. The disk drive apparatus of Claim 37, wherein said table comprises more than two values.

39. The disk drive apparatus of Claim 37, wherein a multiplier is associated with each value within said table of values, wherein said multiplier modifies said output signal.

40. The disk drive apparatus of Claim 35, wherein said controller comprises a proportional-integral controller.

41. The disk drive apparatus of Claim 35, wherein said voice coil motor is provided with a third amount of electrical power over a third period of time to move said actuator arm, wherein said third period of time is not equal to said first and second periods of time.